

**CLAIMS****What is claimed is:**

1. A gas cabinet including an enclosure containing at least one gas supply vessel and flow circuitry coupled to the gas supply vessel(s), and including multiple sticks each of which is arranged for gas flow communication to a respective gas-utilizing process unit, with a vacuum source and a purge gas source being coupled to the flow circuitry and arranged for evacuation and purging of one or more of the multiple sticks, wherein the flow circuitry is valved to enable portions of the flow circuitry associated with respective ones of the multiple sticks to be isolated from other portions of the flow circuitry, so that process gas can be flowed to one or more of the sticks, while other sticks are being evacuated and purged, or otherwise are closed to flow of dispensed gas therethrough.
2. The gas cabinet of claim 1, wherein each gas supply vessel comprises a vessel containing gas and an interiorly mounted gas pressure regulator, arranged so that gas dispensed from the vessel flows through said gas pressure regulator prior to flow from the vessel to said flow circuitry coupled thereto.
3. The gas cabinet of claim 1, wherein each gas supply vessel comprises a vessel containing a physical adsorbent medium sorptively retaining gas thereon, arranged so that gas is desorbed from the physical adsorbent medium during dispensing of gas from the vessel to said flow circuitry coupled thereto.
4. The gas cabinet of claim 1, wherein the enclosure contains two gas supply vessels.
5. The gas cabinet of claim 1, wherein the flow circuitry includes a manifold line to which said two gas supply vessels are coupled, and valves in the manifold line arranged so

that one of the two gas supply vessels is in a dispensing mode while the other of the two gas supply vessels is in a non-dispensing standby mode.

6. The gas cabinet of claim 5, wherein said flow circuitry comprises a branch line connecting the manifold line with a stick manifold to which the multiplicity of sticks is connected.
7. The gas cabinet of claim 6, wherein the flow circuitry further comprises a purge gas manifold line connected by valved purge loops to the multiplicity of sticks, and a purge gas line interconnecting the purge gas source with the purge gas manifold line.
8. The gas cabinet of claim 7, wherein the flow circuitry further comprises a vent line interconnecting the manifold line with the vacuum source.
9. The gas cabinet of claim 8, wherein the vacuum source includes a venturi device.
10. The gas cabinet of claim 8, wherein the purge gas line has a restricted flow orifice therein.
11. The gas cabinet of claim 10, wherein the purge gas line has a purifier therein, upstream of the restricted flow orifice.
12. The gas cabinet of claim 11, wherein the purge gas line has a pressure regulator therein, upstream of the purifier.
13. The gas cabinet of claim 12, wherein the purge gas line has at least one check valve therein, upstream of the pressure regulator.

14. The gas cabinet of claim 13, wherein the purge gas line has a valved purge gas vent line coupled thereto.
15. The gas cabinet of claim 7, wherein each of the multiple sticks has a valve at its inlet end portion, upstream of the valved purge loop connection to the stick, and a valve  
5 downstream of the valved purge loop connection to the stick.
16. The gas cabinet of claim 6, wherein said branch line contains a pressure regulator arranged to regulate pressure of gas flowed into the sticks at a predetermined pressure level.
17. The gas cabinet of claim 6, wherein each of said multiplicity of sticks contains a  
10 pressure regulator at an inlet end portion thereof, arranged to regulate pressure of gas flowed into the sticks.
18. The gas cabinet of claim 6, wherein said branch line contains a pressure regulator, and wherein each of said multiplicity of sticks contains a pressure regulator at an inlet end portion thereof.
- 15 19. The gas cabinet of claim 1, wherein said gas supply vessel(s) contain a semiconductor manufacturing gas.
20. A method of supplying gas to multiple gas-utilizing process units from a gas cabinet including an enclosure containing a gas supply vessel, said method comprising in a first mode of operation, flowing gas from the gas supply vessel through a flow circuitry  
20 including multiple sticks each of which is arranged for gas flow communication to a respective gas-utilizing process unit, and in a second mode of operation, isolating portions of the flow circuitry associated with selected ones of the multiple sticks from

other portions of the flow circuitry, so that gas can be flowed to one or more of the sticks, while evacuating and purging other sticks, or otherwise closing same to flow of gas therethrough.